
MECHANICAL METHODS

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Mechanical Methods.

The term "art" as used in the patent law is intended to include "methods" and "modes" of operation as well as "processes."

Mr. Justice Grier, in delivering the opinion of the court in *Corning vs. Burden* (15 How., 252), said:

"A process *eo nomine*, is not made the subject of a patent in our act of Congress. It is included under the general term 'useful art.' An art may require one or more processes or machines in order to produce a certain result or manufacture. . . . But where the result or effect is produced by chemical action, by the operation or application of some element or power of nature, or of one substance to another, such modes, methods, or operations, are called processes. A new process is usually the result of discovery; a machine of invention."

As stated in *Cochrane vs. Deener*, C. D., 1877, 242; 11 O. G., 687; 97 U. S., 780:

"A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing. . . . The process requires that certain things should be done with certain substances and in a certain order; but the tools to be used in doing this, may be of secondary consequence."

The terms "process," "method," and "mode" are, to a certain extent, used interchangeably in the domain of invention and discovery; although the best usage would seem to indicate that the term "process" should be used when it is intended to refer to an operation including

some chemical or other similar elemental action or the action of an agency of nature.

The terms "method" and "mode" are employed more accurately where the operation intended to be defined, is mechanical and the various elements and parts suffer no change in composition.

The Supreme Court held in *Risdon Iron and Locomotive Works vs. Medart et al.*, C. D., 1895, 330:

"It may be said in general that processes of manufacture which involve chemical or other similar elemental action are patentable, though mechanism may be necessary in the application or carrying out of such process, while those which consist solely in the operation of a machine are not."

In this case, after discussing the cases of: *Mowry vs. Whitney*, 1 O. G., 499, 14 Wall., 620; *Cochrane vs. Deener*, C. D., 1877, 242; *Tilghman vs. Proctor*, C. D., 1881, 163; *O'Reilly vs. Morse*, 15 How., 62; *New Process Fermentation Co. vs. Maus*, C. D., 1887, 402; *Bell Telephone case*, C. D., 1888, 321, and *American Bell Telephone Co. vs. Dolbear*, C. D., 1883, 160, the court said:

"It will be observed that, in all these cases, the process was either a chemical one, or consisted in the use of one of the agencies of nature for a practical purpose.

"It is equally clear, however, that a valid patent can not be obtained for a process which involves nothing more than the operation of a piece of mechanism, or, in other words, for the function of a machine."

It may be remarked that this discussion of the Supreme Court followed a number of decisions which it had rendered in dealing with mechanical methods and processes as follows:

In *Downton vs. The Yeager Milling Co.*, 1883, 434, 25 O. G., 697, it held a mechanical process of "manufacturing middlings-flour" unpatentable over references, but it does not appear to have considered it as relating otherwise to an unpatentable process.

In *Eames vs. Andrews et al.*, C. D., 1887, 378, it held a "process of constructing wells" to be patentable and the patent to have been infringed. In *Hoff et al. vs. The Iron Clad Manufacturing Co.*, C. D., 1891, 332; 55 O. G., 139, it was decided that claim 1 for a "method of forming the body of a coal-hod or other similar vessel," and claim 2 for an "article of manufacture," made by such method, had not been infringed, and while some doubt was expressed as to patentability over references, nothing was said as to the unpatentability of a mechanical method.

In *Hoyt vs. Horne*, C. D., 1892, 435, the following claim for a purely mechanical method was held to be valid and infringed:

"The improvement in beating rags to pulp in a rag engine having a beater-roll and bed-plate knives, consisting in circulating the fibrous material and liquid in vertical planes, drawing the same between the knives at the bottom of the vat, carrying it around, and over the roll and delivering it into the upper section of the vat, substantially as described."

In *Weatherhead et al. vs. Coupe et al.*, C. D., 1893, 203, this quoted claim was held to be for the function of a machine, but it was not intimated in the opinion that mechanical methods were unpatentable:

"The improvement in the method of stretching hides, which consists in dragging the hide over a stretcher, and also over a friction table or beam, by means of a revolving roller, to which the hide is secured, as described, whereby as the hide is passed over the table or beam, the thicker portions of the hide are detained or made to lag by pressure applied to such thicker portions, to increase at such points the friction between the hide and the table, substantially as specified."

Risdon vs. Medart was followed in a few years by *Westinghouse vs. Boyden*, C. D., 1898, 444, 170 U. S.,

537, in which Mr. Justice Brown delivered the opinion of the court, saying among other things:

"*Risdon Locomotive Works vs. Medart* and other cases assume, although they do not expressly decide, that a process to be patentable must involve a chemical or other similar elemental action, and it may be still regarded as an open question whether the patentability of processes extends beyond this class of inventions. Where a process is simply the function or operative effect of a machine, *Corning vs. Burden*, *Risdon Locomotive Works vs. Medart*, and other cases are conclusive against its patentability; but where it is one which, though ordinarily and most successfully performed by machinery, may also be performed by simple manipulation—such, for instance, as the folding of a paper in a peculiar way for the manufacture of paper bags or a new method of weaving a hammock—there are cases to the effect that such a process is patentable, though none of the powers of nature be invoked to aid in producing the result (*Eastern Paper Bag Co. vs. Standard Paper Bag Co.*, C. D., 1887, 537, 41 O. G., 231, 30 F. R., 63; *Union Paper Bag Machine Co. vs. Waterbury*, 30 F. R., 389; *Travers vs. Am. Cordage Co.* C. D., 1895, 125, 70 O. G., 277, 64 F. R., 771);" and Mr. Justice Shiras stated in his dissenting opinion: "I can not assent to what is perhaps rather intimated than decided in the opinion of the court—that what is called a 'process,' in order to be patentable, must involve a chemical or other similar elemental action."

After *Westinghouse vs. Boyden*, above referred to, in which the majority opinion said in effect that it is still an open question whether claims to mechanical methods are patentable, came the decision *The Expanded Metal Co. vs. Bradford et al.*, and *The General Fireproofing Co. vs. The Expanded Metal Co.*, C. D., 1909, 521. The claim in the patent in suit read as follows:

"The herein-described method of making open or reticulated metal work, which consists in

simultaneously slitting and bending portions of a plate or sheet of metal in such manner as to stretch or elongate the bars connecting the slit portions and body of the sheet or plate, and then similarly slitting and bending in places alternate to the first mentioned portions, thus producing the finished expanded sheet metal of the same length as that of the original sheet or place, substantially as described."

The most pertinent paragraph of this opinion is:

"We therefore reach the conclusion that an invention or discovery of a process or method involving mechanical operations, and producing a new and useful result, may be within the protection of the Federal statute, and entitle the inventor to a patent for his discovery."

In *Corning vs. Burden*, Mr. Justice Grier said:

". . . It is when the term process is used to represent the means or method of producing a result that it is patentable, and it will include all methods or means which are not effected by mechanism or mechanical combinations.

"But the term process is often used in a more vague sense, in which it can not be the subject of a patent. Thus we say that a board is undergoing the process of being planed, grain of being ground, iron of being hammered or rolled. Here the term is used subjectively or passively as applied to the machinery operated on, and not to the method or mode of producing that operation, which is by mechanical means, and the use of a machine, as distinguished from a process.

"In this use of the term it represents the function of a machine, or the effect produced by it on the materials subjected to the action of the machine. But it is well settled that a man can not have a patent for the function or abstract effect of the machine, but only for the machine which produces it."

It will be observed that the court did *not* directly say that methods "which are effected by mechanism or mechanical combinations" are *not* patentable.

In the case of *Ex Parte Shippen*, C. D., 1875, 126, decided by the Commissioner of Patents, the claim was as follows:

"The improvement in the art of manufacturing wooden shoes by machinery, hereinbefore set forth, which consists in cutting, shaping, and boring the blank by submitting it successively to the operation of mechanism substantially such as set forth."

The following quotation from that decision, although the holding be by a minor tribunal and prior in point of time, appears, in view of the *Expanded Metal* case to set forth in apt language, the present attitude of the courts and the Office:

"What is set forth is a well-defined order of mechanical operations. The successive steps are all adapted to each other, and the operation performed on the block at one step fits it to receive the operation to be performed upon it at the next; and although the operation is wholly mechanical, and requires a peculiar set of instruments, yet the order in which the successive operations are performed is not inherent in the machinery.

"The function of a machine is that operation which, when set in motion, it inevitably performs. Thus it is the function of a grinding-mill to comminute whatever is passed through it, of a lathe to give shape to bodies placed in it, or of an auger to bore. But where the operation of the machine, or of a series of machines, is supplemented by some new method of operation not contemplated in the construction of the machine, and not the inevitable result of its operation, and the new method subserves a new and useful purpose, it may amount to a patentable process, even though the operation depend necessarily upon the machinery. Such was the process

claimed in the Voelter patent sustained by the court (5 Fish., p. 340), in which the mill or stone upon which the wood was to be reduced to fibre was old, and the novelty consisted in placing the wood in such a way that the fibre was torn transversely—the change in which the invention consisted being solely in the method of using the machine, which method was not contemplated originally in making the machine, did not necessarily result from its operation, required evident invention, and produced a new and improved result.”

The opinion of the Court of Appeals of the District of Columbia, in the decision *In re Weston*, C. D., 1901, 290, 94 O. G., 1786, intimates that *Risdon vs. Medart* seems to have been misunderstood by some courts and by the Patent Office, as restricting the patentability of processes to those which involved chemical or other elemental action, and further states: “But we deem it unnecessary to go into that consideration; for we find no real antagonism between the two cases;” that is, between *Risdon vs. Medart* and *Westinghouse vs. Boyden*.

Whether there be an apparent conflict between the two decisions or not, a discussion of it becomes immaterial in view of the Expanded Metal case.



